IN THE CLAIMS:

Please amend the claims as follows:

1. (Original) Apparatus for predicting bone fracture risk in an osteoporotic patient, which apparatus comprises a Dual X-ray Absorptiometry scanner for scanning a body area of the patient and producing a Dual X-ray Absorptiometry image of the body area; image analysis means for analysing pre-determined aspects of the Dual X-ray Absorptiometry image, the aspects being pre-determined according to the part of the body being scanned, and for generating an image data set from the Dual X-ray Absorptiometry image; and data comparison means comprising a database of comparative data sets from Dual X-ray Absorptiometry images of control subjects, for comparison with the image data set for the Dual X-ray Absorptiometry image of the patient, to thereby predict the risk of bone fracture in the patient.

2. (Original) Apparatus according to claim 1 wherein the body part is a proximal femur.

3. (Original) Apparatus according to claim 1 or 2 wherein the image analysis means analyses the Dual X-ray Absorptiometry image by analysis of the shape of the body part.

4. (Original) Apparatus according to claim 3 wherein the Dual X-ray Absorptiometry image is analysed using an Active Shape Model.

5. (Original) Apparatus according to claim 4 wherein the data comparison means compares the Active Shape Model data set generated from the Dual X-ray Absorptiometry image of the patient with the comparative data sets in the database by examining how the location of landmark points deviates from the mean co-ordinates of the comparative data sets.

6. (Currently Amended) Apparatus according to ~~any preceding~~ claim 1, wherein the image analysis means analyses the Dual X-ray Absorptiometry image by analysis of the texture of the body part.

7. (Original) Apparatus according to claim 6 wherein the analysis of the texture of the body part uses Fourier transforms and Principal Component Analysis.

8. (Original) Apparatus according to claim 7 wherein the Dual X-ray Absorptiometry image is digitised and regions of interest identified in the image, from which a power spectrum is obtained from a Fourier transform of each region of interest, and profiles of each region produced, the Principal Component Analysis generating a data set from each profile, which can be compared with the database of comparative data sets.

9. (Currently Amended) Apparatus according to ~~any preceding~~ claim 1, wherein the image analysis means uses more than one image analysis method.

10. (Original) Apparatus according to claim 9 wherein the image analysis means uses both shape and texture analysis.

11. (Original) Apparatus according to claim 10 wherein the image analysis means uses an Active Shape Model and Fourier transforms and Principal Component Analysis.

12. (Currently Amended) Apparatus according to ~~any preceding~~ claim 1, for predicting fracture risk in different body parts.

13. (Original) Apparatus according to claim 12 for predicting fracture risk in more than one of the proximal femur, wrist, ankle, hand and spine.

14. (Currently Amended) Apparatus according to ~~any preceding~~ claim 1, which compares i) the fracture risk prediction value obtained from comparison of the image data set for the Dual X-ray Absorptiometry image of the patient with the database of comparative data sets, with ii) bone mineral density data obtained from the Dual X-ray Absorptiometry image.

15. (Currently Amended) Apparatus according to ~~any preceding~~ claim 1, for measuring the progression of a disorder which affects the shape or trabecular structure of bone.

16. (Original) Apparatus according to claim 15 for measuring the progression of osteoarthritis or Paget's Disease.

17. (Currently Amended) Apparatus according to ~~any preceding~~ claim 1, for measuring non-pathological changes in a subject associated with age, gender, body mass index and/or genetics.

18. (Original) Apparatus substantially as hereinbefore described.